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	First Named Inventor	Chang Chia-Chen	
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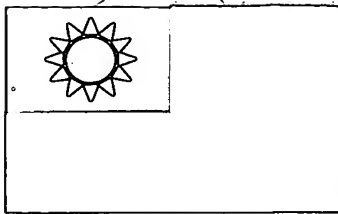
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其申請資料如下：

This is to certify that annexed is a true copy from the records of this
office of the application as originally filed which is identified hereunder:

申請日：西元 2003 年 01 月 28 日
Application Date

申請案號：092201620
Application No.

申請人：台灣莫仕股份有限公司、莫仕股份有限公司
Applicant(s)

局長
Director General

蔡練生

發文日期：西元 2004 年 2 月 17 日
Issue Date

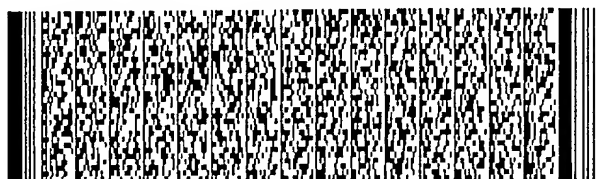
發文字號：09320146660
Serial No.

申請日期：	IPC分類
申請案號：	

(以上各欄由本局填註)

新型專利說明書

一、 新型名稱	中 文	電子卡連接器 (一)
	英 文	
二、 創作人 (共1人)	姓 名 (中文)	1. 張家禎
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	代表人 (中文)	1. 克瑞貝爾 2. 路易士. 耶. 賀特
	代表人 (英文)	1. 2. LOUIS A. HECHT



四、中文創作摘要 (創作名稱：電子卡連接器(一))

一種電子卡連接器(一)，包括有絕緣本體、導電端子、及彈性端子，該絕緣本體側壁外緣設有凹槽，該彈性端子各具有一本體、一彈性臂及一焊接部，該彈性臂係由該本體一側延伸而成，該焊接部係由該本體下緣彎折形成，該本體上形成有擋止片，該彈性端子係組裝於該絕緣本體側壁上，且令該彈性端子之本體上的擋止片卡止於該絕緣本體側壁凹槽內上緣處；藉此，可使彈性端子有效的固定，不會產生搖晃、鬆動，使彈性端子間可維持良好的接觸。

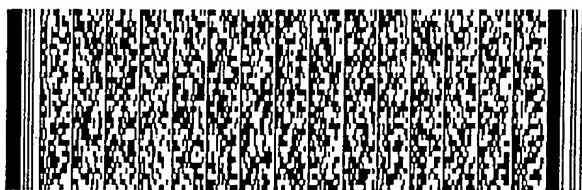
五、(一)、本案代表圖為：第一圖

(二)、本案代表圖之元件代表符號簡單說明：

1 0 絕緣本體

1 1 主體

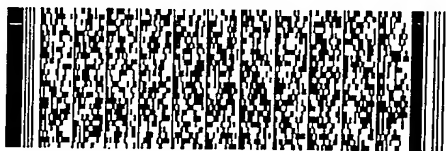
英文創作摘要 (創作名稱：)



四、中文創作摘要 (創作名稱：電子卡連接器(一))

1 2	側 架	1 3	插 置 空 間
1 4	凹 槽	1 5	限 位 槽
1 6	限 位 槽	2 0	導 電 端 子
3 0	第 一 彈 性 端 子	3 1	本 體
3 2	彈 性 臂	3 3	焊 接 部
3 4	擋 止 片	4 0	第 二 彈 性 端 子
4 1	本 體	4 2	彈 性 臂
4 3	焊 接 部		

英文創作摘要 (創作名稱：)



一、本案已向

國家(地區)申請專利

申請日期

案號

主張專利法第一百零五條準用
第二十四條第一項優先權

無

二、☐主張專利法第一百零五條準用第二十五條之一第一項優先權：

申請案號：

無

日期：

三、主張本案係符合專利法第九十八條第一項☐第一款但書或☐第二款但書規定之期間

日期：



五、創作說明 (1)

【 新 型 所 屬 之 技 術 領 域 】

本創作係有關於一種電子卡連接器 (一)，尤指一種可供電子卡插置，使電子卡可電連接至電路結構或儲存裝置之電子卡連接器。

【 先 前 技 術 】

按，電子卡 (IC 卡) 為一資料輸入裝置，其可電連接至一電路結構或一儲存裝置，例如文的字處理器、個人電腦或其他電路結構，儲存在電子卡內的資料將被傳輸至該電路結構，電子卡係為一種可攜帶的工具，其可由一電子卡連接器輕易的插入及退出。

習知的電子卡連接器，可用以插接及退出電子卡，為了提供防止寫入的功能，一般係於電子卡連接器之絕緣本體一側壁上固定有二彈性端子，該二彈性端子各具有一彈性臂，且該二彈性端子之彈性臂係維持有一定距離，藉該二彈性端子組成一防止寫入之控制開關。

當電子卡之控制元件切換成可寫入功能時，在電子卡插置於該電子卡連接器中時，該電子卡一側之控制元件會頂觸其中一彈性端子之彈性臂向外移動並與該另一彈性端子對應之彈性臂接觸，使該二彈性端子導通，並將訊號傳遞至電路板，使電子卡成可寫入狀態。

當電子卡之控制元件切換成防止寫入功能時，在電子卡插置於該電子卡連接器中時，該電子卡一側之控制元件不會頂觸該二彈性端子接觸導通，使電子卡成防止寫入狀態。



五、創作說明 (2)

惟，上述習知之電子卡連接器，其作為防止寫入控制開關之彈性端子，一般僅利用設於彈性端子之本體二側的倒刺與絕緣本體利用干涉作用固定，彈性端子的固持效果較差，當電子卡在插入或抽出的過程中，會導致彈性端子產生搖晃、鬆動，進而使彈性端子間無法維持良好的接觸，使其無法發揮正常的功能。

是以，由上可知，上述習知的電子卡連接器，在實際使用上，顯然具有不便與缺失存在，而可待加以改善者。

緣是，本創作人有感上述缺失之可改善，乃特潛心研究並配合學理之運用，終於提出一種設計合理且有效改善上述缺失之本創作。

【新型內容】

本創作之主要目的，在於可提供一種電子卡連接器（一），其可使電子卡連接器之彈性端子有效的固定，使彈性端子不會產生搖晃、鬆動，使彈性端子間可維持良好的接觸。

為了達成上述之目的，本創作係提供一種電子卡連接器（一），包括：絕緣本體，其具有一主體及左、右二側架，該主體與該二側架之間形成一插置空間，該絕緣本體側壁設有凹槽；導電端子，其設置於該絕緣本體之主體上；以及彈性端子，其各具有一本體、一彈性臂及一焊接部，該彈性臂係由該本體一側延伸而成，該焊接部係由該本體下緣彎折形成，該本體上形成有擋止片，該彈性端子係組裝於該絕緣本體側壁上，且令該彈性端子之本體上的擋

五、創作說明 (3)

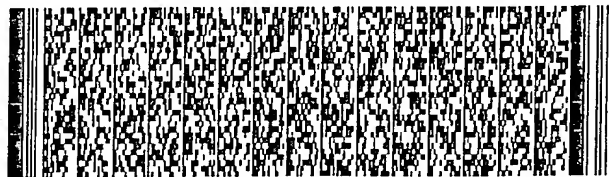
止片上緣卡止於該絕緣本體側壁凹槽內上緣處。

為使能更進一步瞭解本創作之特徵及技術內容，請參閱以下有關本創作之詳細說明與附圖，然而所附圖式僅提供參考與說明用，並非用來對本創作加以限制者。

【實施方式】

請參閱第一圖、第二圖、第三圖及第四圖，本創作係提供一種電子卡連接器(一)，其可用以插接及退出電子卡，該電子卡連接器包括有一絕緣本體10、複數個導電端子20、一第一彈性端子30及一第二彈性端子40所構成，其中該絕緣本體10係以塑膠材料製成，其具有一主體11及左、右二側架12，該二側架12係一體成型連接於該主體11二側，藉以構成一「U」型體，使該主體11與該二側架12之間形成有一插置空間13，該插置空間13可供一電子卡插置。該絕緣本體10一側壁外緣設有一凹槽14。該絕緣本體10一側壁上並設有二限位槽15、16，以便於分別定位第一彈性端子30及第二彈性端子40，凹槽14係位於限位槽15中間。

該等導電端子20係以導電性良好的金屬材料製成，其間隔設置於該絕緣本體10之主體11上，該等導電端子20各具有一接觸部21及一接腳部22。當電子卡插置於該插置空間13內時，該等導電端子20之接觸部21可與設置於電子卡上之對應端子形成電性連接。該等導電端子20另一端之接腳部22則延伸出絕緣本體10外，可用以鉗接於電路板上，使該等導電端子20與電路板



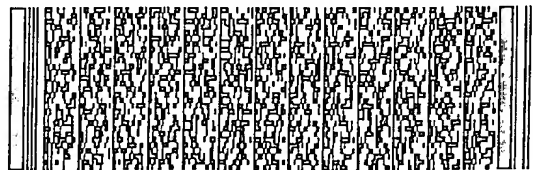
五、創作說明 (4)

形成電性連接。

該第一彈性端子 30 係以導電性良好的金屬材料製成，其係具有一本體 31、一彈性臂 32 及一焊接部 33，該彈性臂 32 係由該本體 31 一側上緣處水平延伸而成，該焊接部 33 係由該本體 31 下緣向外彎折形成，該本體 31 二側並設有相對之倒刺 35，該本體 31 上向內沖製形成有一突出於本體 31 內緣之擋止片 34，該擋止片 34 係由下往上向內傾斜。

該第一彈性端子 30 之本體 31 係組裝於該絕緣本體 10 一側壁上的限位槽 15 中，且令該第一彈性端子 30 之本體 31 上的擋止片 34 可插入該絕緣本體 10 側壁之凹槽 14 內，並以擋止片 34 上緣卡止於凹槽 14 內上緣處，用以防止該第一彈性端子 30 向上移動，且該本體 31 二側之倒刺 35 可刺入該絕緣本體 10 塑膠材料中，使該第一彈性端子 30 之本體 31 利用干涉作用固定於該絕緣本體 10 上。該第一彈性端子 30 之焊接部 33 可用以焊接於電路板上，使該第一彈性端子 30 與電路板達成電性連接，且可用以防止該第一彈性端子 30 向下移動。

該第二彈性端子 40 係以導電性良好的金屬材料製成，其係具有一本體 41、一彈性臂 42 及一焊接部 43，該彈性臂 42 係由該本體 41 一側上緣處水平延伸而成，該焊接部 43 係由該本體 41 下緣向外彎折形成，該本體 41 另一側上緣處水平延伸形成有一接觸臂 44，該接觸臂 44 與該彈性臂 42 大致呈直角狀，另於該本體 41 二

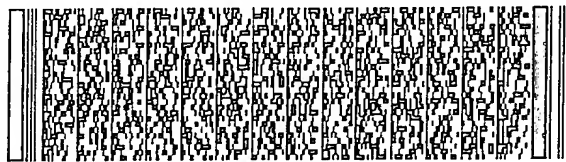
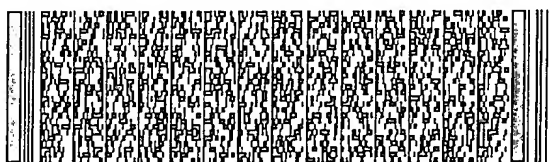


五、創作說明 (5)

側設有相對之倒刺 4 5。

該第二彈性端子 4 0 之本體 4 1 係組裝於該絕緣本體 1 0 一側壁上之另一限位槽 1 6 中，且該本體 4 1 二側之倒刺 4 5 可刺入該絕緣本體 1 0 塑膠材料中，使該第二彈性端子 4 0 之本體 4 1 利用干涉作用固定於該絕緣本體 1 0。該第二彈性端子 4 0 之焊接部 4 3 可用以焊接於電路板上，使該第二彈性端子 4 0 與電路板達成電性連接。該第二彈性端子 4 0 之彈性臂 4 2 係位於該第一彈性端子 3 0 之彈性臂 3 2 內側一定距離處，當電子卡插置於該絕緣本體 1 0 之插置空間 1 3 中時，該電子卡會頂觸該第二彈性端子 4 0 之彈性臂 4 2 向外移動並與該第一彈性端子 3 0 對應之彈性臂 3 2 接觸導通，藉該第一彈性端子 3 0 及該第二彈性端子 4 0 組成一防止寫入之控制開關。

另，該絕緣本體 1 0 上進一步的設有一上蓋 6 0，且該絕緣本體 1 0 上另進一步的設有一第三彈性端子 5 0，該第三彈性端子 5 0 一端具有一彈性臂 5 1，該彈性臂 5 1 係位於該第二彈性端子 4 0 之接觸臂 4 4 前方一定距離處，當電子卡插置於該絕緣本體 1 0 之插置空間 1 3 中時，該電子卡一端會頂觸該第三彈性端子 5 0 之彈性臂 5 1 向後移動並與該第二彈性端子 4 0 對應之接觸臂 4 4 接觸，使第三彈性端子 5 0 與該第二彈性端子 4 0 達成電性連接，藉以導通電子卡連接器的電路，使電子卡連接器開始運作；藉由上述之組成以形成本創作之電子卡連接器（一）。



五、創作說明 (6)

當電子卡之控制元件切換成可寫入功能時，在電子卡插置於該絕緣本體10之插置空間13中時，該電子卡一側之控制元件會頂觸該第二彈性端子40之彈性臂42向外移動並與該第一彈性端子30對應之彈性臂32接觸，使該二彈性端子30及40導通，並將訊號傳遞至電路板，使電子卡成可寫入狀態。

當電子卡之控制元件切換成防止寫入功能時，在電子卡插置於該絕緣本體10之插置空間13中時，該電子卡一側之控制元件不會頂觸該第二彈性端子40之彈性臂42向外移動，因此該二彈性端子30及40不會導通，使電子卡成防止寫入狀態。

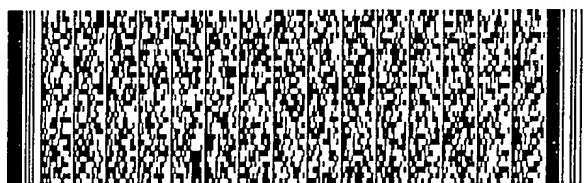
本創作主要係於該絕緣本體10設有凹槽14，且於彈性端子30之本體31上設有相對應之擋止片34，藉擋止片34卡止於凹槽14內上緣處，用以防止該彈性端子30向上移動，並搭配彈性端子30之焊接部33焊接於電路板上，用以防止該彈性端子30向下移動，使彈性端子30不會上、下移動。因此彈性端子30除了利用本體31組裝於絕緣本體10之限位槽15中，以及利用本體31二側之倒刺35固定於該絕緣本體10，藉以防止彈性端子30產生前後、左右的移動外，更可利用擋止片34與凹槽14相互卡制定位，而使第一彈性端子30具有多方向的固定力量，可使彈性端子30更加穩固的固定於該絕緣本體10上，故本創作電子卡連接器之彈性端子30可有效的固定，使彈性端子30在電子卡插入或抽出

五、創作說明 (7)

的過程中不會產生搖晃、鬆動，而使彈性端子 30、40 間可維持良好的接觸。

綜上所述，本創作實為一不可多得之新型創作產品，極具產業上利用性、新穎性及進步性，完全符合新型專利申請要件，爰依專利法提出申請，敬請詳查並賜准本案專利，以保障創作者之權益。

惟以上所述僅為本創作之較佳可行實施例，非因此即拘限本創作之專利範圍，故舉凡運用本創作說明書及圖式內容所為之等效結構變化，均同理皆包含於本創作之範圍內，合予陳明。



圖式簡單說明

【圖式簡單說明】

第一圖係本創作之立體分解圖。

第二圖係本創作之立體組合圖。

第三圖係本創作之側視圖（去除上蓋）。

第四圖係本創作之俯視圖（去除上蓋）。

【元件代表符號】

1 0 絕緣本體

1 1 主體

1 3 插置空間

1 5 限位槽

1 2 側架

1 4 凹槽

1 6 限位槽

2 0 導電端子

2 1 接觸部

2 2 接腳部

3 0 第一彈性端子

3 1 本體

3 2 彈性臂

3 3 焊接部

3 4 擋止片

3 5 倒刺

4 0 第二彈性端子

4 1 本體

4 2 彈性臂

4 3 焊接部

4 4 接觸臂

4 5 倒刺

5 0 第三彈性端子

5 1 彈性臂

6 0 上蓋



六、申請專利範圍

1、一種電子卡連接器（一），包括：

絕緣本體，其具有一主體及左、右二側架，該主體與該二側架之間形成一插置空間，該絕緣本體側壁設有凹槽；

導電端子，其設置於該絕緣本體之主體上；以及

彈性端子，其各具有一本體、一彈性臂及一焊接部，該彈性臂係由該本體一側延伸而成，該焊接部係由該本體下緣彎折形成，該本體上形成有與該絕緣本體側壁凹槽相對應之擋止片，該彈性端子係組裝於該絕緣本體側壁上，且令該彈性端子之本體上的擋止片上緣卡止於該絕緣本體側壁凹槽內上緣處。

2、如申請專利範圍第1項所述之電子卡連接器（一），其中該凹槽係設於該絕緣本體側壁外緣，且該擋止片係突出於該彈性端子之本體內緣。

3、如申請專利範圍第1項所述之電子卡連接器（一），其中該導電端子各具有一接觸部及一接腳部，該接腳部延伸出該絕緣本體外。

4、如申請專利範圍第1項所述之電子卡連接器（一），其中該彈性端子之本體二側設有倒刺，該本體二側之倒刺係刺入該絕緣本體中。

5、如申請專利範圍第1項所述之電子卡連接器（一），其中該彈性端子係指一第一彈性端子及一第二彈性端子，該第二彈性端子之彈性臂係位於該第一彈性端子之彈性臂內側，且該絕緣本體上進一步設有一第三彈性端子，

六、申請專利範圍

該第三彈性端子具有一彈性臂，該第二彈性端子之本體另一側延伸形成有一接觸臂，該第三彈性端子之彈性臂係位於該第二彈性端子之接觸臂前方。

6、如申請專利範圍第1項所述之電子卡連接器（一），其中該絕緣本體上進一步的設有一上蓋。

7、如申請專利範圍第1項所述之電子卡連接器（一），其中該絕緣本體一側壁上設有限位槽，該凹槽係位於該限位槽中間，該彈性端子之本體係組裝於該限位槽中。



100

THE
FOLIO
FOLIO

1000




100

100

1000



100



100

100

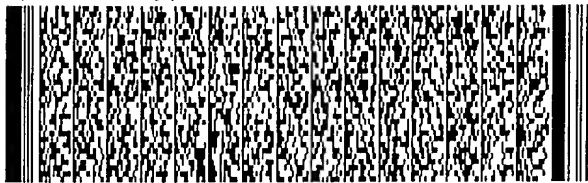
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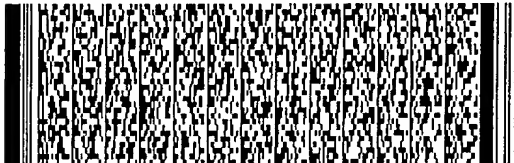
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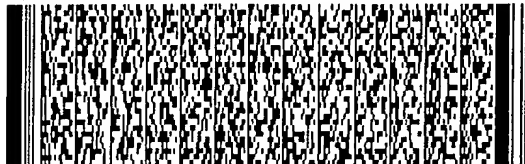
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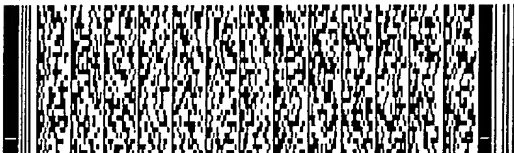
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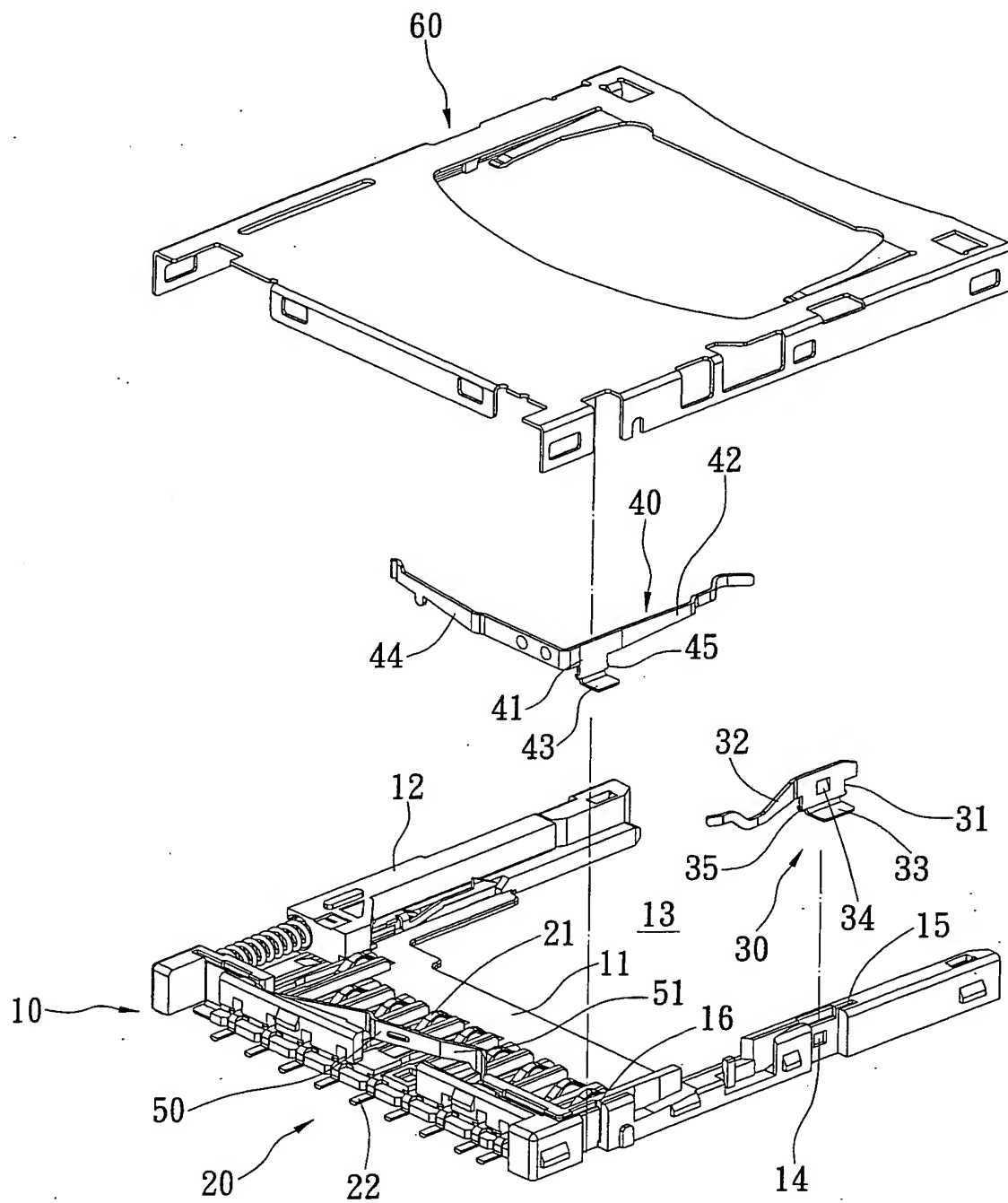


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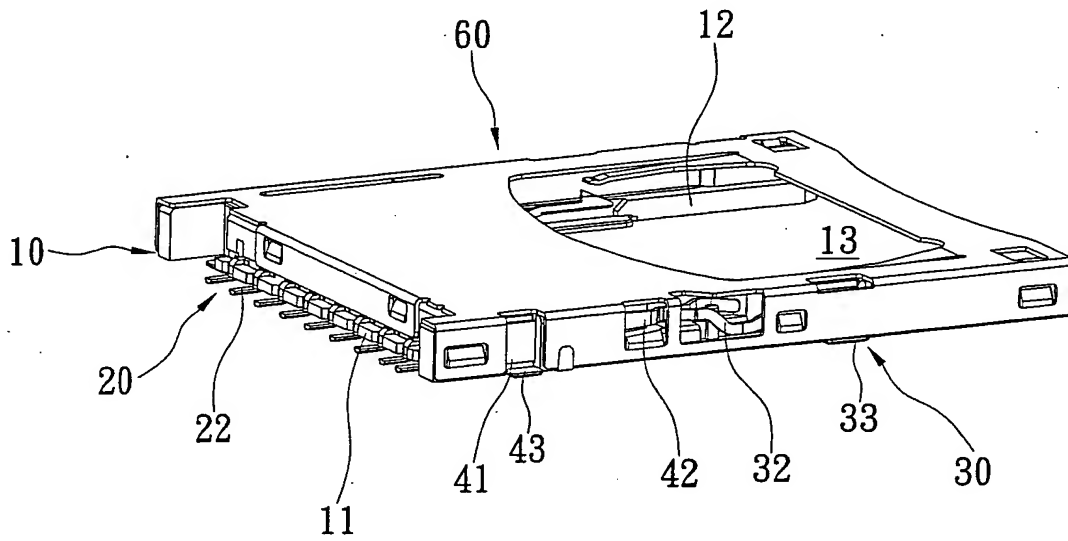


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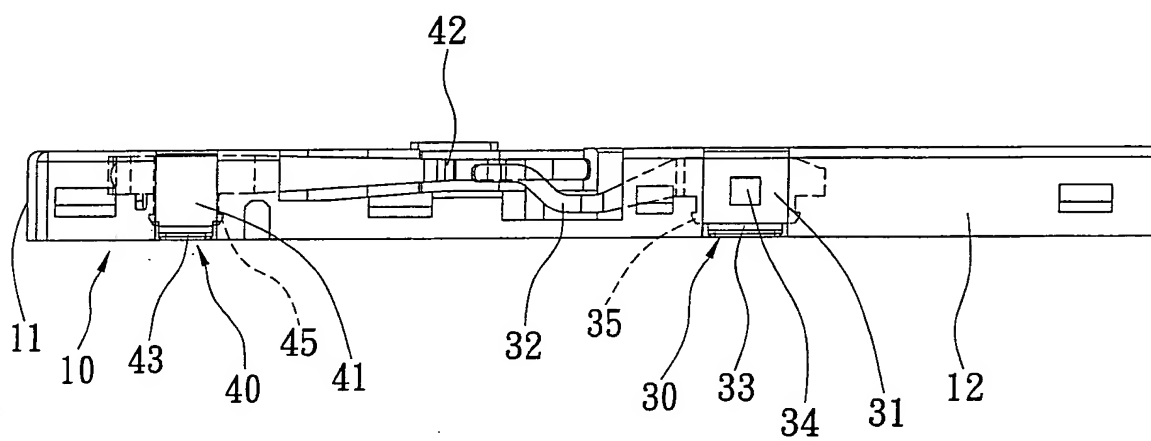




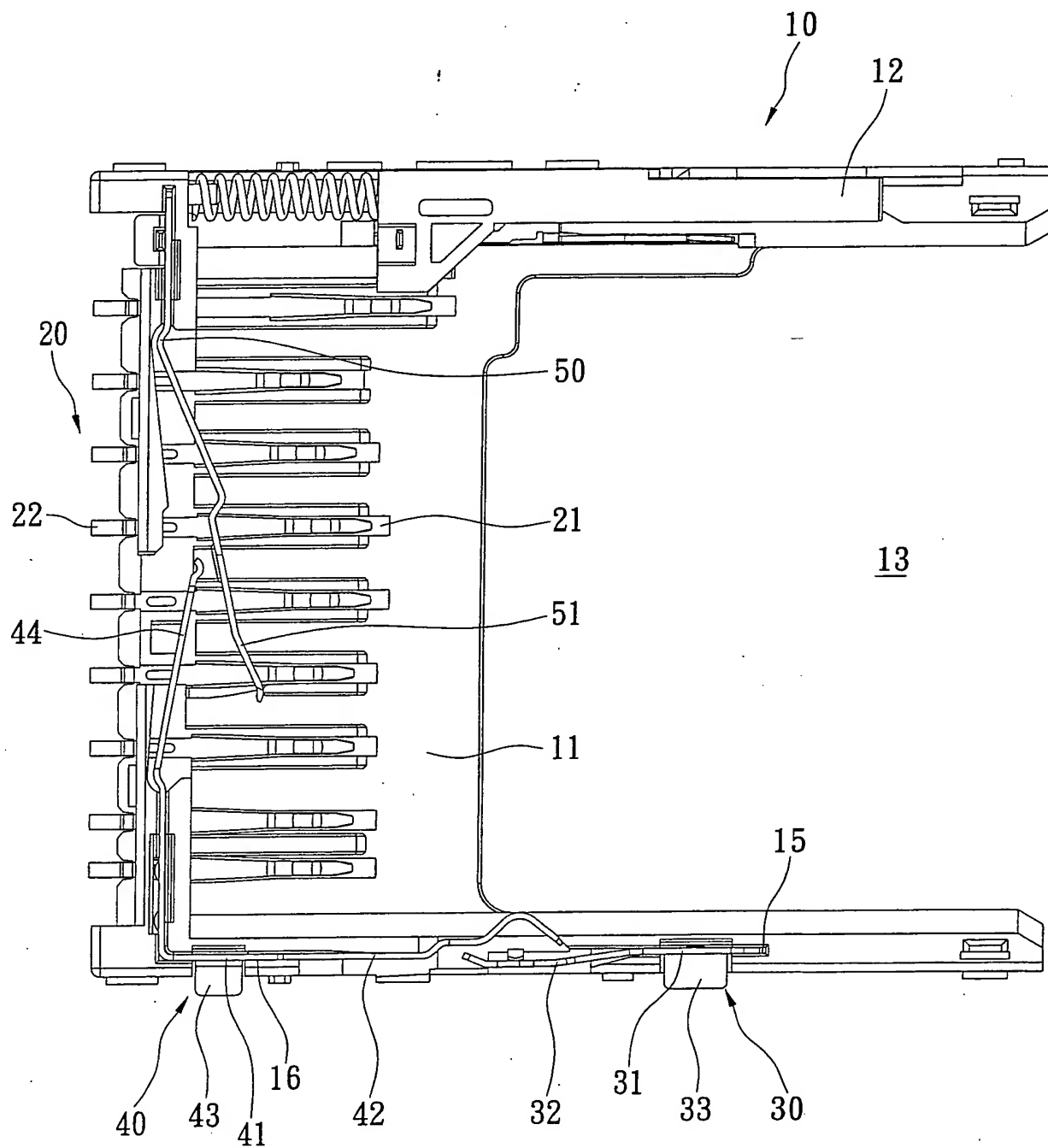
第一圖



第二圖



第三圖



第四圖

Taiwan Patent App. No.	92201620
Filing Date	JAN. 28, 2003
Molex Ref.	A3-269 UM TW
Lien-Cheng Ref.	92P00084

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	Representative	Louis A. Hecht

A F F I D A V I T

I, Manuel Lin being duly sworn, depose and say:

That I am thoroughly conversant with the Chinese and English languages, that I have carefully read the attached translation and compared same with original document in Chinese language (the application number 92201620), that said translation is a true and correct version of such original, to the best of my knowledge and belief.

My name and post office address are as stated below:

Full name of translator: Manuel Lin

Signature of translator: Manuel Lin

Post office address: No. 12, Lane 7, Sec.2, Xiu-Ming Rd., Wen Shan Dist.,
Taipei, Taiwan, R.O.C.

Date: December 8, 2003

ELECTRICAL CARD CONNECTOR

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to an electrical card connector, and
5 particularly to an electrical connector for receiving an electrical card,
which is electrically connecting the electrical card to a circuit structure
or an electrical appliance.

2. Description of the Prior Art

Electrical card (IC card) is a kind of data storage device and can
10 transmit between electrical appliances, for example, word processor,
personal computer, or personal data assistant. The electrical card is a
portable storage medium and usually writes or reads via an electrical
card connector.

The electrical card connector of prior art is provided for
15 inserting/ejecting an electrical card, and has write-protection function.
For write protecting, the prior art usually uses two elastic conductive
terminals to compose a controlling switch. The two elastic terminals are
mounted in one lateral portion of the electrical card connector and
respectively have an elastic arm. The two elastic arms are arranged
20 closely and has a predetermined distance therebetween.

The electrical card has a write-protecting lock which is mounted
thereon. When switching off the write-protecting lock, the
write-protecting lock will push one of the elastic arms to contact with
another elastic arm for electrically connecting the two elastic arms. Then

the signals can transmit between the electrical card and the printed circuit board (PCB).

When switching on the write-protecting lock, the write-protecting lock will not push one of the elastic arms to contact with another elastic arm. The two elastic arms are separate, and the signals can not transmit
5 between the electrical card and the printed circuit board (PCB).

However the elastic terminals of the electrical card connector of prior art are usually mounted in the electrical card connector by barbs formed on the elastic terminals. The elastic terminals are fixed in the
10 electrical card connector with interfering force only. The retaining result usually is worse. When the electrical card is drawing in or drawing out, the elastic terminals will shake or loosen, and then the elastic terminals can not contact well to function normally.

Therefore, an improved electrical card connector providing a stable
15 communicating with PCB is desired.

SUMMARY OF THE INVENTION

An object of the present invention is to provide an electrical card connector, particular to an electrical card connector retaining elastic terminals stably without shaking or loosening, so that the elastic
20 terminals maintains good contacting.

To fulfill the above mentioned object, the present invention according to a preferred embodiment of the present invention, an electrical card connector comprises an insulative housing, a plurality of contacts, and a pair of elastic terminals. The insulative housing has a
25 base and two lateral frames extending from two sides of the base and

defining an inserting cavity therebetween. One of the lateral frames has two retaining slots respectively formed with a cutout, wherein at least one of the retaining slots has a notch formed therein. The contacts are mounted in the base of the insulative housing. The pair of elastic
5 terminals respectively has a body portion engaged in the retaining slot, an elastic arm extending from one side edge of the body portion, and a soldering portion extending and bending from a bottom edge of the body portion. At least one of the body portion has a stopping plate formed thereon by stamping and the stopping plate is wedged in the notch of the
10 lateral frame. An upper edge of the stopping plate is fastened on an upper edge of the notch.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view of an electrical card connector of the present invention;

15 FIG. 2 is an assembling view of the electrical card connector of the present invention;

FIG. 3 is a side view of the electrical card connector of the present invention (removing a cover); and

FIG. 4 is a top view of the electrical card connector of the present
20 invention (removing the cover).

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to Figs. 1 to 4, an electrical card connector the present invention for receiving/ejecting an electrical card comprises an insulative housing 10, a plurality of contacts 20, a first elastic terminal

30 and a second elastic terminal 40. The insulative housing 10 is made of elastic material and has a base 11 and two lateral frames 12. The lateral frames 12 are integrally extending from two sides of the base 11 and defining an U-shaped inserting cavity 13 therebetween for receiving an electrical card (not shown). One of the lateral frames has two retaining slots 15, 16 formed thereon for retaining the first and second elastic terminals 30, 40. The two retaining slots 15, 16 are respectively formed with a cutout (not labeled), and one of the retaining slots 15 has a notch 14 formed therein. The notch 14 is concaved inwardly from a surface of the cutout of the lateral frame 12.

The contacts 20 are made of well-conductive metal and are mounted in the base 11 of the insulative housing 10 with spaced intervals. Each contact 20 has a contacting portion 21 and a soldering leg 22. The contacting portions 21 are electrically connecting to the mating contacts (not shown) of the electrical card. The soldering legs 22 are extending beyond the insulative housing 10 and soldered on a printed circuit board (not shown) for electrically connecting with the printed circuit board.

The first elastic terminal 30 is made of well-conductive metal and has a body portion 31, an elastic arm 32, and a soldering portion 33. The body portion 31 is engaged in the retaining slot 15. The elastic arm 32 is extending horizontally from one side edge of the body portion 31. The soldering portion 33 is extending and bending from a bottom edge of the body portion 31. The body portion 31 of the first elastic terminal 30 has a stopping plate 34 formed thereon by stamping. The stopping plate 34 is protruding inwardly from the body portion 31 of the first elastic terminal

30. The stopping plate 34 is wedged in the notch 14 of the insulative housing 10. An upper edge of the stopping plate 34 is fastened on an upper edge of the notch 14 for preventing the first elastic terminal 30 from moving upwardly. Moreover, the body portion 31 of the first elastic terminal 30 has barbs 35 formed thereon and engaged in the retaining slots 15 of the insulative housing 10, so that the first elastic terminal 30 is fixed interferingly in the insulative housing 10 for preventing the first elastic terminal 30 from moving laterally. The soldering portion 33 is soldered on the PCB for electrically connecting the first elastic terminal 30 with the PCB and preventing the first elastic terminal 30 from moving downwardly.

The second elastic terminal 40 is made of well-conductive metal and has a body portion 41, an elastic arm 42, and a soldering portion 43. The body portion 41 is engaged in the retaining slot 16 of the insulative housing 10. The elastic arm 42 is extending horizontally from one side edge of the body portion 41. The soldering portion 43 is extending and bending from a bottom edge of the body portion 41. The second elastic terminal 40 has a contacting arm 44 that is extending horizontally from the body portion 41. The contacting arm 44 is substantially vertical to the elastic arm 42. The body portion 41 of the second elastic terminal 40 has barbs 45 formed thereon.

The body portion 41 is engaged in the retaining slot 16 and the barbs 45 are engaged in the insulative housing 10, so that the second elastic terminal 40 is fixed in the insulative housing 10 with interfering force. The soldering portion 43 is soldered on the PCB for electrically

connecting the second elastic terminal 40 with the PCB. The elastic arm 42 of the second elastic terminal 40 is disposed at an inside of the elastic arm 32 of the first elastic terminal 30 with a predetermined distance. When the electrical card inserting in the inserting cavity 13, the electrical card will push the elastic arm 42 of the second elastic terminal 40 to move outwardly for contacting with the elastic arm 32 of the first elastic terminal 30, thereby the first elastic terminal 30 and the second elastic terminal 40 composes a controlling switch.

The electrical card connector further comprises a shielding cover 60 which is covered on the insulative housing 10 and a third elastic terminal 50 which is mounted on the base 11 of the insulative housing 10. The third elastic terminal 50 has an elastic arm 51 which is disposed before the contacting arm 44 of the second elastic terminal 40 with a predetermined distance. When the electrical card inserting in the inserting cavity 13, the front edge of the electrical card will press rearward the elastic arm 51 of the third elastic terminal 50 to contact with the contacting arm 44 of the second elastic terminal 40 for conducting a circuit of the electrical card connector with the electrical appliance, thereby the electrical card connector will function.

When switching off a write-protecting lock of the electrical card in a write-enable condition, the write-protecting lock will push the elastic arm 42 of the second elastic terminal 40 to contact with the elastic arm 32 of the first elastic terminal 30 for electrically connecting the two elastic arms 32,42. Then the signals can transmit between the electrical card and the printed circuit board (PCB).

When switching on the write-protecting lock of the electrical card in a write-inhibit condition, the write-protecting lock will not push the elastic arm 42 of the second elastic terminal 40 to contact with the elastic arm 32 of the first elastic terminal 30. The two elastic arms 32,42 are
5 separate, and the signals can not transmit between the electrical card and the printed circuit board (PCB).

The sum up of the characters and advantages are as follow. The stopping plate 34 is wedged in the notch 14 of the insulative housing 10, and the upper edge of the stopping plate 34 is fastened on the upper edge
10 of the notch 14 , therefore preventing the first elastic terminal 30 from moving upwardly. The soldering portion 33 is soldered on the PCB, therefore preventing the first elastic terminal 30 from moving downwardly. The barbs 35 of the body portion 31 of the first elastic terminal 30 are engaged in the retaining slots 15 of the insulative
15 housing 10, so that the first elastic terminal 30 is fixed in the insulative housing 10 with interfering force, therefore preventing the first elastic terminal 30 from moving laterally. To sum up, the first elastic terminal 30 is fixed via multi-directions force and retained in the electrical card connector more stably. When the electrical card is drew in or out, the
20 first elastic terminal 30 will not loosen or shake, and the first elastic terminal 30 and the second elastic terminal 40 keep in good contacting.

Although the present invention has been described with reference to the preferred embodiments, it will be understood that the invention is not limited to the details described thereof. Various substitutions and
25 modifications have been suggested in the foregoing description, and

others will occur to those of ordinary skill in the art. Therefore , all such substitutions and modifications are intended to be embraced within the scope of the invention as defined in the appended claims.

WHAT IS CLAIMED IS:

1. An electrical card connector, comprising:

an insulative housing having a base and two lateral frames extending from two sides of the base and defining an inserting cavity therebetween, one of the lateral frames having two retaining slots respectively formed with a cutout, wherein at least one of the retaining slots has a notch formed therein;

a plurality of contacts mounted in the base of the insulative housing;

and

a pair of elastic terminals respectively having a body portion engaged in the retaining slot, an elastic arm extending from one side edge of the body portion, and a soldering portion extending and bending from a bottom edge of the body portion, wherein at least one of the body portion has a stopping plate formed thereon by stamping and the stopping plate is wedged in the notch of the insulative housing, and wherein an upper edge of the stopping plate is fastened on an upper edge of the notch.

2. The electrical card connector as claimed in claim 1, wherein the notch is concaved inwardly from a surface of the cutout of the lateral frame, and the stopping plate is protruding inwardly from the body portion of the elastic terminal.

3. The electrical card connector as claimed in claim 1, wherein each of the contacts have a contacting portion and a soldering leg, and wherein the soldering legs are extending beyond the insulative housing.

4. The electrical card connector as claimed in claim 1, wherein each body portion of the elastic terminals has barbs formed thereon and engaged in the retaining slots of the lateral frame.

5. The electrical card connector as claimed in claim 1, wherein the pair of elastic terminals are first and second elastic terminals, and the elastic arm of the second elastic terminal is disposed adjacent the elastic arm of the first terminal.

6. The electrical card connector as claimed in claim 1, further comprising a third elastic terminal mounted on the base thereof, wherein the third elastic terminal has an elastic arm, and the second elastic terminal has a contacting arm extending from the body portion thereof, and wherein the elastic arm of the third elastic terminal is disposed before the contacting arm of the second elastic terminal.

7. The electrical card connector as claimed in claim 1, further comprising a shielding cover covered on the insulative housing.

ABSTRACT

An electrical card connector has an insulative housing , a plurality of contacts ,and a pair of elastic terminals. The insulative housing has a base and two lateral frames extending from two sides of the base. One of
5 the lateral frames has two retaining slots, and at least one of the retaining slots has a notch formed therein. Each elastic terminal has a body portion engaged in the retaining slot, an elastic arm extending from one side edge of the body portion, and a soldering portion extending and bending from a bottom edge of the body portion. one of the body portion has a
10 stopping plate formed thereon which is wedged in the notch of the insulative housing. Thereby, enabling the elastic terminal to be fixed effectively, not to occur a shake and relaxation, and to maintain a better contact therebetween.

Description of the Numerals in Figures

[the present invention]

- | | | | |
|----|-------------------------|----|------------------|
| 10 | insulative housing | | |
| 11 | base | 12 | lateral frame |
| 13 | inserting cavity | 14 | notch |
| 15 | retaining groove | 16 | retaining groove |
| 20 | contact | | |
| 21 | contacting portion | 22 | soldering leg |
| 30 | first elastic terminal | | |
| 31 | body portion | 32 | elastic arm |
| 33 | soldering portion | 34 | stopping plate |
| 35 | barb | | |
| 40 | second elastic terminal | | |
| 41 | body portion | 42 | elastic arm |
| 43 | soldering portion | 44 | contacting arm |
| 45 | barb | | |
| 50 | third elastic terminal | | |
| 51 | elastic arm | | |
| 60 | shielding cover | | |

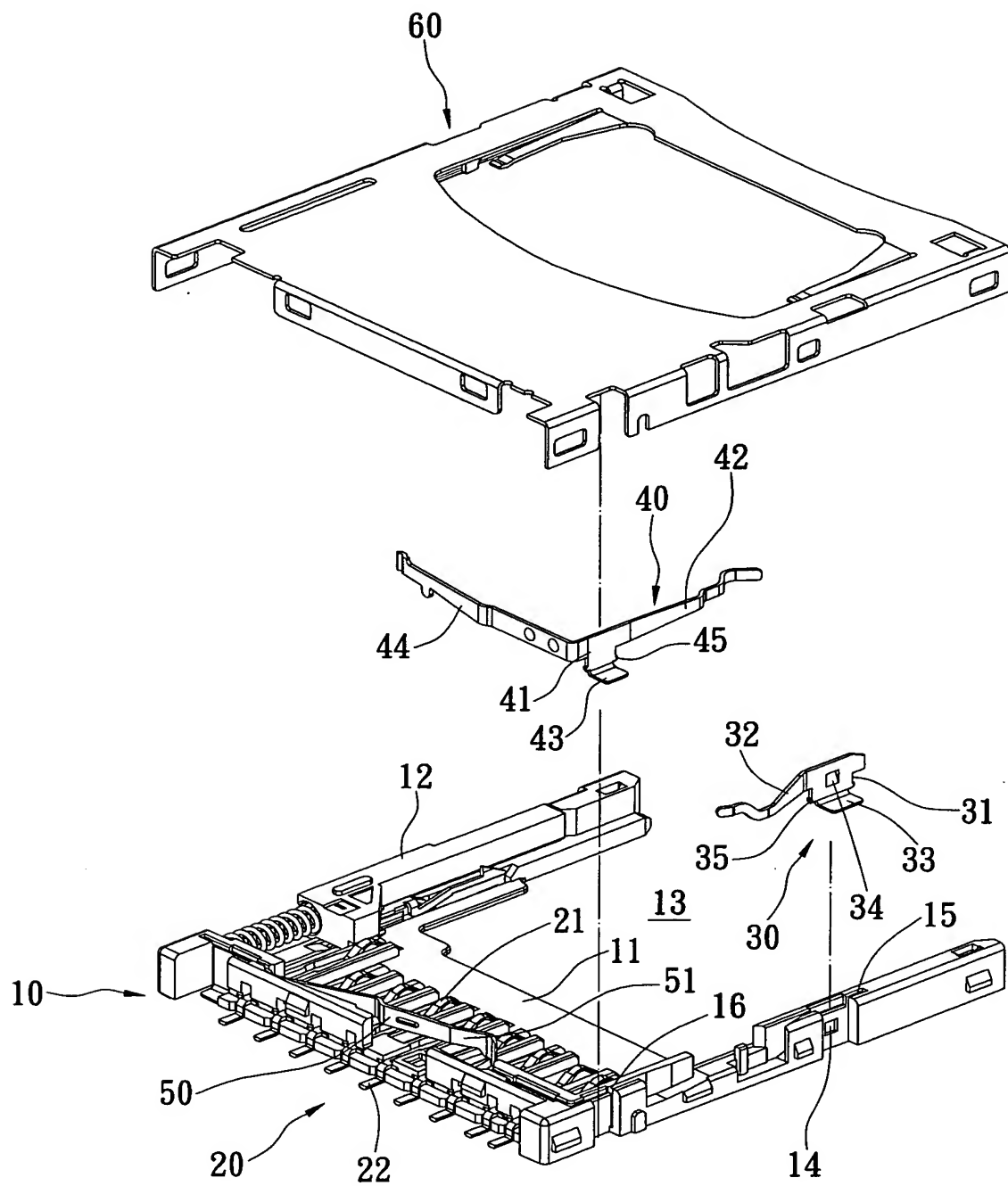


FIG. 1

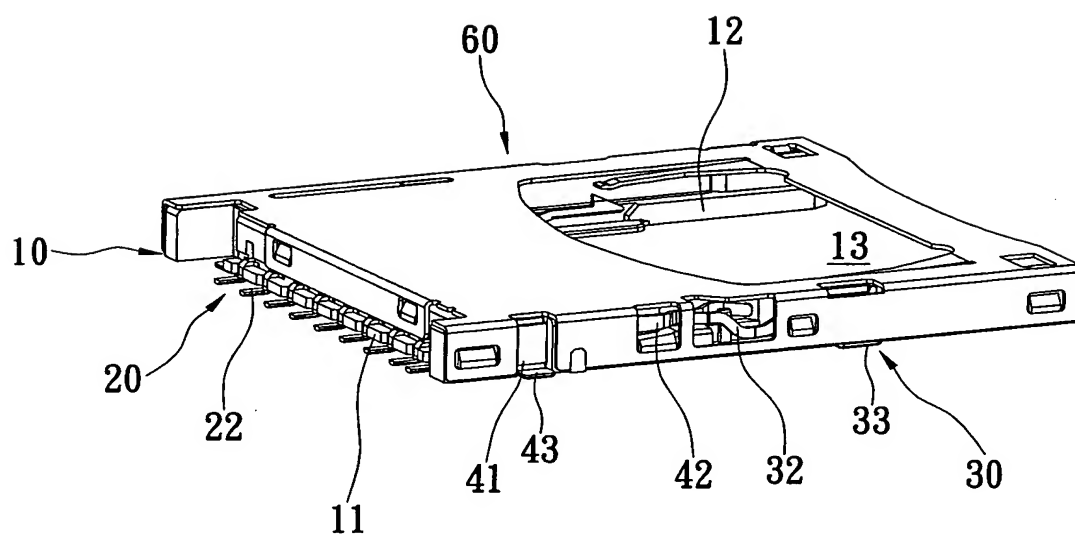


FIG. 2

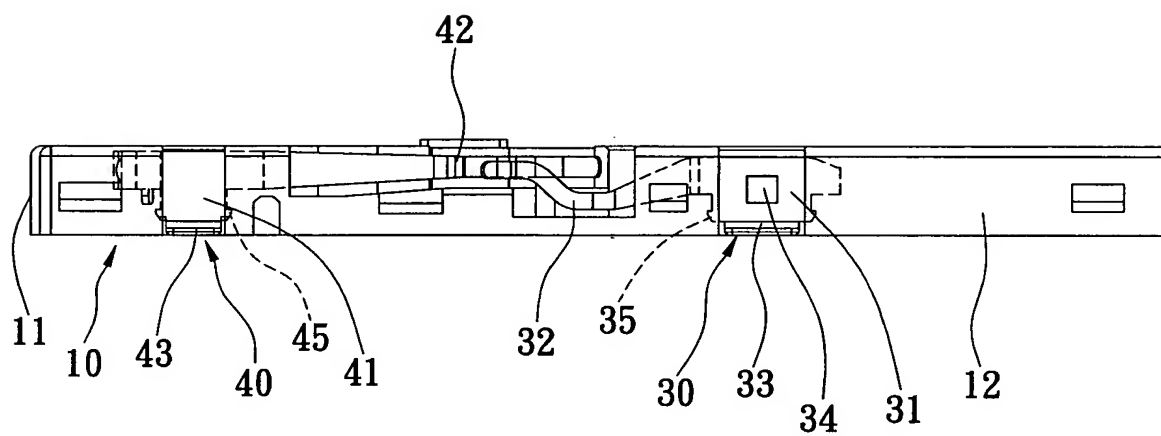


FIG. 3

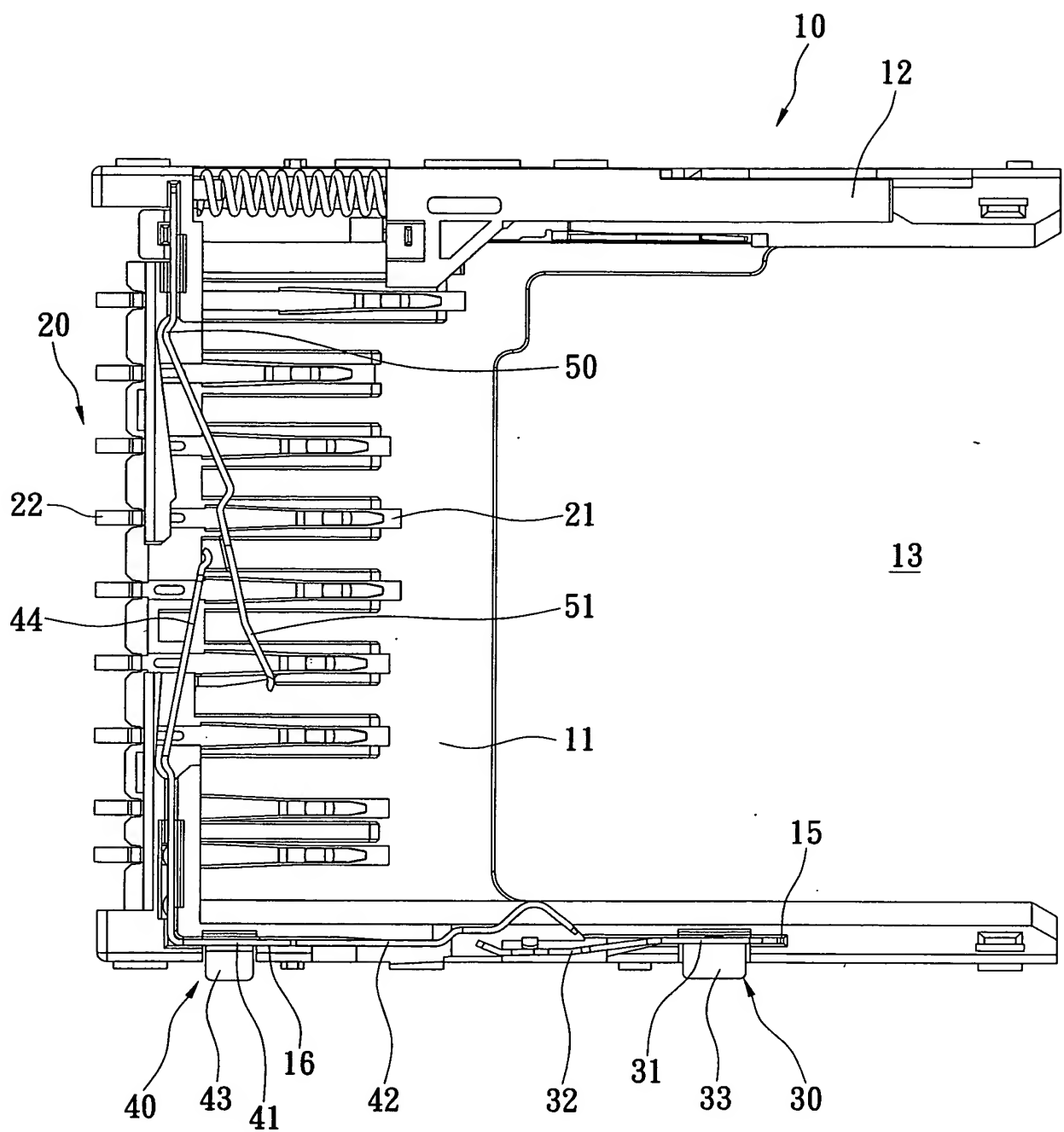


FIG. 4